



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/072,728	02/07/2002	Chester L. Schuler	IMM043E	2651

60140 7590 05/17/2007
IMMERSION -THELEN REID BROWN RAYSMAN & STEINER LLP
P.O. BOX 640640
SAN JOSE, CA 95164-0640

EXAMINER

KUMAR, SRILAKSHMI K

ART UNIT	PAPER NUMBER
----------	--------------

2629

MAIL DATE	DELIVERY MODE
-----------	---------------

05/17/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/072,728	Applicant(s) SCHULER ET AL.	
	Examiner Srilakshmi K. Kumar	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/20/2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19-25 and 27-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19-25 and 27-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/20/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The following office action is in response to the request for reconsideration, filed on February 20, 2007. Claims 19-25, 27-33 are pending.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 19-25, 27-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over McIntosh (US 5,103,404) in view of Applicant's Admitted Prior Art (AAPA).

In reference to claims 19, 25, 31 and 33, McIntosh teach a device comprising a moveable member (Fig. 2); an actuator coupled to the moveable member (col. 4, lines 37-41), the actuator being configured to output haptic feedback (col. 4, lines 37-41), the haptic feedback including a modulating force simulating a plurality of electronically defined stop positions (col. 2, lines 49-54, col. 3, lines 1-30); a data storage component configured to store torque data associated with the haptic feedback (col. 10, lines 46-53), the torque data being associated with a plurality of force profiles (col. 2, lines 49-54), the torque data being provided by a host computer (col. 10, lines 24-25) based on a selection of at least one force profile from the plurality of force profiles (col. 10, lines 24-25); a sensor coupled to the moveable member (col. 7, lines 50-57), the sensor being configured to send position information associated with a position of the moveable member (col. 7, lines 50-57); a local controller coupled to the data storage component (RAM and ROM) and the actuator (Fig. 10), the local controller being configured to be in communication

Art Unit: 2629

with the host computer (col. 10, lines 24-25); the local controller being configured to send a control signal to the actuator, the control signal being based on data values associated with a host software application of the host computer, the haptic feedback simulating a plurality of electronically defined stop positions being associated with the position information and the host software application (in column 2, lines 49-54, McIntosh teaches that the “the motion of (the) motor, is determined by either operator controlled movements of the control motor or preprogrammed motion instructions” i.e. a force profile. More specifically, he teaches “the manipulator motor is driven to its desired position as determined by the control motor, or in some cases, preprogrammed instructions” and “that the system provides a readily programmable degree of coupling between the two motors” in column 3, lines 1-30).

McIntosh does not disclose wherein the haptic feedback including a modulating force simulating a plurality of electronically defined stop positions. Applicant’s Admitted Prior Art on page 2, line 17-page 3, line 5 teach where it is well known in the art where haptic feedback devices have control wheel that exhibit tactile responsiveness, such as detents or clicks as they are rotated, wherein each click is a modulating force simulating a plurality of electronically defined stop positions, such that each click corresponds to one frame. Therefore, it would have been obvious to include the modulating force simulating a plurality of electronically defined stop positions as taught by AAPA, as the stop positions enable the user to determine frame rates as discussed on pages 2 and 3 of applicant’s specification.

In reference to claim 20, McIntosh teaches the use of two motors for performing feedback (column 2, lines 42-43).

Art Unit: 2629

In reference to claim 21, McIntosh teaches that the data storage component is capable of storing and recalling information (column 10, lines 5-8).

In reference to claims 22 and 32, in column 4, lines 37-41, McIntosh teaches that the torque values are used to produce the desired tactile feedback force.

In reference to claims 23 and 28, as shown in figure 10, McIntosh teaches the data storage component is external to the controller.

In reference to claims 24 and 29, as shown in figure 10, McIntosh teaches the RAM and ROM components are external to the microprocessor (item 61), however one skilled in the art understands that control chips may be constructed to include memory elements. This feature of where the RAM and ROM are internal to the processor is evidenced by Sanderson (US 4,768,412) in col. 10, lines 56-66 where a microprocessor is taught to internally include the RAM and ROM. It would have been obvious for one skilled in the art to use a controller with an internal storage component in order to reduce the number of parts needed to fabricate the invention.

In reference to claim 27, McIntosh teaches that the moveable member is a portion of an actuator (column 4, lines 37-41).

In reference to claim 30, McIntosh's storage component (figure 10, item 65) receives data from a remote processor (item 26).

Response to Arguments

3. Applicant's arguments filed February 20, 2007 have been fully considered but they are not persuasive.

Art Unit: 2629

With respect to Applicant's arguments in regards to the 102 rejection, the section titles for the rejection were written as a 102, but should have been 103. These have been changed accordingly.

With respect to applicant's arguments in regards to applicant's admitted prior art not teaching the force feedback "clicks", examiner respectfully, disagrees. In the applicant's admitted prior art (Fig. 1, pages 2-3), it is shown where the actuator wheel is clicked in a haptic feedback manner. Further, in applicant's specification and drawings (Figs. 7-10 and pages 19-23), it is clearly shown where the claimed actuator is a wheel, which clicks in a haptic feedback manner. Thus the applicant's admitted prior art of Fig. 1 and pages 2-3 teach the claimed limitations.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Srilakshmi K. Kumar whose telephone number is 571 272 7769. The examiner can normally be reached on 9:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sue Lefkowitz can be reached on 571 272 3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2629

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Srilakshmi K Kumar
Examiner
Art Unit 2629

SKK
May 10, 2007


SUMATI LEFKOWITZ
SUPERVISORY PATENT EXAMINER